

## REMARKS

Claims 1-6 and 17-19 are currently pending in the application, while Claims 7-16 have been cancelled.

Claim 1 is being amended as follows: The phrase “in collaborative e-commerce” has been deleted at line 2. In addition, the phrase “each with an embedded state machine or controller therein” (*see* Specification, page 3, line 19 – page 4, line 1) has been added at lines 4-5, and the phrase “by specifying valid application states for aggregated content and business” has been deleted at lines 5-6. Also, the phrase “an ADOC linking content” has been changed to “wherein each ADOC composed in said composing step links content” at line 7 (*see* Specification, page 11, lines 4-6); and the phrase “wherein an available set of services in said business collaboration process varies with a change in a business state of ADOC instances to orchestrate a variety of applications and user interactions in a context of said business collaboration process” (*see* Specification, page 3, lines 1-4 and page 1, lines 6-9) has been added at lines 8-11, while the phrase “and enabling collaborative business process management through orchestration of a variety of applications and user interactions in a context of a business process” is deleted at lines 11-13. Finally, the phrase, “wherein said ADOC views depend on said business state in the business collaboration process and roles people have in the business collaboration process” has been added at lines 15-16 (*see* Specification, page 3, lines 10-15; page 12, line 19 – page 13, line 10; and Figure 3).

The amendments address rejection lodged under 35 U.S.C. 112, second paragraph.

Claims 1-6 and 17-19 stand rejected under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent Publication No. 2002/0019797 by Stewart et al. Applicants traverse as discussed below.

The claimed invention facilitates electronic commerce by using Adaptive Documents (ADOCs) to implement process brokering services. The claimed invention breaks an overall process state space into constituent ADOCs plus simpler workflow states, which is not taught by Stewart et al. The Examiner has rejected the claims of the claimed invention based on an incorrect analogy between the ADOC of the claimed

invention and the c-space taught by Stewart et al. The c-space taught by Stewart et al. is “an abstraction supporting a single business model, business message protocols, a secure message space, security policies, quality of service policies, and a registered set of business trading partners.” (Stewart et al., Paragraph 25) The error appears in part to be based on the incorrect conclusion that ADOCs are nothing more than transient objects used to model message input/output to workflow activities. In the claimed invention, ADOCs are used in connection with workflow (Specification, page 5, lines 9-17), and workflow is distinct from messaging. (Figure 1)

In the claimed invention, an ADOC is a distinct component with its own state, independent of the state of the workflows that it brokers. (Specification, page 11, lines 10-14) An ADOC is a “document” in which a finite state machine is embedded (Specification, page 3, lines 19-20) and which can also hold minimal state information. (Specification, page 27, lines 12-13) The document uses the state machine to respond to business events. (Figure 2)

Taking the example of an RFQ process (Specification, page 24, lines 6-8; Figures 11-16, 20-22), an ADOC’s lifecycle states (Specification, page 10, lines 25-26) could be Create, Modify, Submit, Cancel, and so forth. (Figure 11) As the ADOC goes from state to state (Specification at 23, lines 12-13), the ADOC could potentially launch one or more workflows for actual execution of the tasks. (Specification, page 5, lines 9-11) For example, if going from a Submit to a Request Change state, the ADOC could launch an Approval workflow. (Figure 12, 15) The Approval workflow could have tasks to execute the approval process, for example, certain companies may require multiple levels of approval. (Specification, page 12, lines 9-11, 14-15) The overall business state of the process at any point of time is the combination of ADOC state + state of all workflows in execution. (Specification, page 30, lines 12-21)

Different “views” of an ADOC are available to different role players in a process in which ADOCs are employed. (Claim 1, line 9) Use of these different “views” restricts end users’ ability to read and/or update ADOC data or to trigger state transitions in the ADOC. For example, the Requisitioner can update the Purchase Order data in the Draft state, but has read-only access once the Purchase Order has been Submitted (*i.e.*, in the

Submitted state). It is because the view “adapts” on the basis of the current state of a document that the name Adaptive Document (ADOC) is used. This is not taught by Stewart et al.

For illustrative purposes, two figures have been attached which contrast that which is shown in Stewart and that which is shown and claimed in the present invention. Specifically, in Stewart the process state is the work flow state, while in the present invention the process state is the workflow state plus all ADOC states.

Claim 1. In rejecting independent Claim 1, the Examiner erroneously concluded that Paragraphs 30, 56, 59, 61, 79, 82, 84, 169-70, and 377 of Stewart et al. teach the requirements of Claim 1. As discussed above, Stewart et al. do not anticipate or make obvious to one of ordinary skill in the art, among other things, ADOCs which are distinct components, each having its own state independent of the state of the workflows that it brokers. (See, e.g., Specification at 3, lines 16-20)

The portions of the disclosure of Stewart et al. cited in support of rejecting Claim 1 (Office Action at 4) do not, in fact, anticipate the recited features of this claim. Paragraph 30 of Stewart et al. discusses the use of a collaboration hub with a messaging protocol. In addition, Paragraphs 56, 59 and 61 of Stewart et al. contain general discussions of business-to-business electronic commerce. Paragraph 79 of Stewart et al. discusses the use of the message routing system disclosed by Stewart et al. in conjunction with a workflow process server such as the WebLogic Process Integrator product from BEA Systems., which is not claimed in Claim 1. Paragraphs 82 and 84 of Stewart et al. discuss the embodiment of the message routing system of Stewart et al. as shown in two of the drawings included in the reference, neither of which drawings teaches the use of ADOCs. Paragraphs 169-70 of Stewart et al. discuss the use of a c-space which is distinguished from an ADOC as discussed above, in conjunction with business logic plug-ins employed in the preferred embodiment of the message routing system disclosed by Stewart et al. Finally, Paragraph 377 of Stewart et al. discusses the business-model independence of the subject matter disclosed by Stewart et al., which is not claimed in Claim 1

The disclosure of Stewart et al. does not, as a result, teach or suggest an ADOC

that can “link content aggregated from various data sources to business collaboration processes and people, wherein an available set of services in said business process varies with a change in a business state of ADOC instances to orchestrate a variety of applications and user interactions in a context of said business collaboration process” (Claim 1, lines 7-11) or that can “assemble an integrated user experience through sequencing of ADOC views, wherein said ADOC views depend on said business state in the business collaboration processes and roles people have in the business collaboration process” (Claim 1, lines 14-16). In view of this, Claim 1 would not be obvious to one of ordinary skill in the art in view of Stewart et al. and should be allowed.

Claims 2-6 and 17-19. Claims 2-6 and 17-19 should be allowed as depending from allowable Claim 1. Additional arguments for allowing Claims 2-6 and 17-19 are discussed below.

The requirement of Claim 2 for a step of “formulating business objects that are referenced from the ADOCs” is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. Paragraphs 71 and 282 of Stewart et al., on which the Examiner relies to support the rejection of Claim 2 (Office Action at 4), discuss interoperability features of the message routing system of Stewart et al. (Paragraph 71) and use of the system in conjunction with a RosettaNet router (Paragraph 282). These teachings do not anticipate or make obvious Claim 2.

The requirement of Claim 3 for steps of “defining a set of messages” and “generating application adapters to communicate with back-end systems using the set of messages to represent business data” (Claim 3, lines 2-4) is not anticipated by Paragraphs 79-80 of Stewart et al., on which the Examiner relies in support of rejection (Office Action at 4), discuss the use of a message routing system in conjunction with a workflow process server such as the WebLogic Process Integrator product from BEA Systems, and do not teach or suggest the steps of Claim 3.

The requirement of Claim 4 for steps of “specifying valid application states for aggregated content” and “specifying business rules for orchestrating state transitions” (Claim 4, lines 3-4) is not anticipated. Paragraphs 30, 132, 169, and 377 of Stewart et al., on which the Examiner relies in support of rejection (Office Action at 5), discuss: the use

of a collaboration hub with a messaging protocol (Paragraph 30); the use of a c-space which is distinguished from an ADOC, above (Paragraphs 132 and 169); and the business-model independence of the subject matter disclosed by Stewart et al. (Paragraph 377) Neither specifying application states nor orchestrating state transitions, as required by Claim 4, is taught.

The requirement of Claim 5 for “interactions with said ADOCs [to be] through programmatic means (Claim 5, lines 1-2) is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. Paragraphs 25-28 and 82-84 of Stewart et al., on which the Examiner relies to support the rejection of Claim 5 (Office Action at 5), discuss use of a collaboration hub as the execution engine of a c-space (Paragraphs 25-28) and the embodiment of the message routing system of Stewart et al. as shown in three of the drawings included in their disclosure, none of which teaches the use of ADOCs. (Paragraphs 82-84). These teachings do not anticipate or suggest Claim 5.

The requirement of Claim 6 for “interactions with said ADOCs [to be] through view-based human interactions (Claim 6, lines 1-2) is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. As discussed in connection with Claim 5, above, Paragraphs 25-28 and 82-84 of Stewart et al., on which the Examiner relies to support the rejection of Claim 6 (Office Action at 5), discuss use of a collaboration hub as the execution engine of a c-space (Paragraphs 25-28) and the embodiment of the message routing system of Stewart et al. as shown in three of the drawings included in their disclosure, none of which teaches the use of ADOCs. (Paragraphs 82-84). These teachings do not anticipate or suggest Claim 6.

The requirement of Claim 17 for a step of “allowing clients to perform one or more creating, deleting, archiving and restoring ADOCs” (Claim 17, lines 2-3) is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. As discussed in connection with Claims 5 and 6, above, Paragraphs 25-28 and 82-84 of Stewart et al., on which the Examiner relies to support the rejection of Claim 17 (Office Action at 5), discuss use of a collaboration hub as the execution engine of a c-space (Paragraphs 25-28) and the embodiment of the message routing system of Stewart et al.

as shown in three of the drawings included in their disclosure, none of which teaches the use of ADOCs. (Paragraphs 82-84). These teachings do not anticipate or suggest Claim 17.

The requirement of Claim 18 for a step of “allowing clients to query the business state of the ADOC” (Claim 18, line 2) is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. As discussed in connection with Claim 4, above, Paragraphs 132, 169, and 377 of Stewart et al., on which the Examiner relies in support of rejecting Claim 18 (Office Action at 6), discuss the use of a c-space, which is distinguished from an ADOC, above (Paragraphs 132 and 169), and the business-model independence of the subject matter disclosed by Stewart et al. (Paragraph 377) Querying the business state of an ADOC, as required by Claim 18, is not taught or suggested by Stewart et al.

The requirement of Claim 19 for a step of “allowing a client to raise an event against a specific ADOC instance” (Claim 19, line 2) is not anticipated by Stewart et al., because the reference does not teach the use of ADOCs. As discussed in connection with Claims 5, 6 and 17, above, Paragraphs 25-28 and 82-84 of Stewart et al., on which the Examiner relies to support the rejection of Claim 19 (Office Action at 5), discuss use of a collaboration hub as the execution engine of a c-space (Paragraphs 25-28) and the embodiment of the message routing system of Stewart et al. as shown in three of the drawings included in their disclosure, none of which teaches the use of ADOCs. (Paragraphs 82-84). These teachings do not anticipate or suggest Claim 19.

In view of the foregoing, Applicants submit that Claims 1-6 and 17-19 are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed.

Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Applicants' Deposit Account No. 50-0510 (IBM Corporation).

Respectfully submitted,



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